

State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Alameda County Environmental Health Department (County)	Address: 1131 Harbor Bay Parkway, Alameda, CA 94502
Agency Caseworker: Barbara Jakub	Case No.: RO0000291

Case Information

USTCF Claim No.: 9201	Global ID: T0600101605
Site Name: Kawahara Nursery	Site Address: 16550 Ashland Avenue, San Lorenzo, CA 94580
Responsible Party: Dave Kawahara	Address: 689 Burnett Avenue, Morgan Hill, CA 95037
USTCF Expenditures to Date: \$178,780	Number of Years Case Open: 20

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101605

Summary

The Low-Threat Underground Storage Tank (UST) Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Policy. This case meets all of the required criteria of the Policy. A summary evaluation of compliance with the Policy is shown in **Attachment 1: Compliance with State Water Board Policies and State Law**. The Conceptual Site Model upon which the evaluation of the case has been made is described in **Attachment 2: Summary of Basic Case Information (Conceptual Site Model)**. Highlights of the case follow:

An unauthorized release was reported in December 1992 following the removal of one UST. Since 1993, six monitoring wells have been installed and monitored intermittently; four wells remain onsite. No active remediation has been conducted. According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents.

The petroleum release is limited to the soil and shallow groundwater. According to data available in GeoTracker, there are no California Department of Public Health regulated supply wells or surface water bodies within 250 feet of the defined plume boundary. There is one onsite irrigation well that has not been used for 5 years. The well is screened between 45 and 65 feet, reportedly with at least 15 feet of clay between the contaminated zone and the screened interval. No other water supply wells have been identified within 250 feet of the defined plume boundary in files reviewed. Water is provided to water users near the Site by the East Bay Municipal Utilities District. The affected groundwater is not currently being used as a source of drinking water, and it is highly unlikely that the affected groundwater will be used as a source of drinking water in the foreseeable future. Other designated beneficial uses of impacted groundwater are not threatened and it is highly unlikely that they will be considering these factors in the context of the site setting. Remaining petroleum hydrocarbon constituents are limited and stable, and concentrations are decreasing.

Corrective actions have been implemented and additional corrective actions are not necessary. Any remaining petroleum hydrocarbon constituents do not pose a significant risk to human health, safety or the environment.

Rationale for Closure under the Policy

- General Criteria: The case meets all eight Policy general criteria.
- Groundwater Specific Criteria: The case meets Policy Criterion 1 by Class 5. The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product. The nearest surface water body is greater than 250 feet from the defined plume boundary. The nearest water supply well, an unused irrigation well, is approximately 20 feet upgradient from the defined plume boundary. The County has stated that the well is not hydrologically connected to the impacted groundwater. The regulatory agency determines, based on an analysis of site specific conditions, which under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame.
- Vapor Intrusion to Indoor Air: This case meets Policy Criterion 2b. A site-specific risk assessment of potential exposure to petroleum constituents as a result of vapor intrusion [Franklin J Goldman, March 2013] found that maximum concentrations of petroleum constituents remaining in soil and groundwater will have no significant risk of adversely affecting human health.
- Direct Contact and Outdoor Air Exposure: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Policy Table 1 for Commercial/Industrial use, and the concentration limits for a Utility Worker are not exceeded.

Objections to Closure and Responses

By June 28, 2013 letter, the County opposes closure because:

- Groundwater plume is not defined.
RESPONSE: The downgradient extent of groundwater contamination is adequately defined by MW-5 and MW-6.
- Preferential pathway study is required.
RESPONSE: There is no evidence that free product or significant groundwater contamination existed at this Site that would require such a study.
- Documents not uploaded to GeoTracker.
RESPONSE: The case meets all the criteria of the Policy.
- Conceptual site model is inadequate.
RESPONSE: Adequate data are available in GeoTracker and the County database to construct a conceptual site model. The case meets all Policy criteria.

Determination

Based on the review performed in accordance with Health & Safety Code Section 25299.39.2 subdivision (a), the Fund Manager has determined that closure of the case is appropriate.

Kawahara Nursery
16550 Ashland Avenue, San Lorenzo
Claim No: 9201

August 2013

Recommendation for Closure

Based on available information, residual petroleum hydrocarbons at the Site do not pose a significant risk to human health, safety, or the environment, and the case meets the requirements of the Policy. Accordingly, the Fund Manager recommends that the case be closed. The State Water Board is conducting public notification as required by the Policy. Alameda County has the regulatory responsibility to supervise the abandonment of monitoring wells.

Lisa Babcock

Lisa Babcock, P.G. 3939, C.E.G. 1235

9/29/13

Date

Prepared by: Kirk Larson, P.G.

ATTACHMENT 1: COMPLIANCE WITH STATE WATER BOARD POLICIES AND STATE LAW

The case complies with the State Water Resources Control Board policies and state law. Section 25296.10 of the Health and Safety Code requires that sites be cleaned up to protect human health, safety, and the environment. Based on available information, any residual petroleum constituents at the site do not pose significant risk to human health, safety, or the environment.

The case complies with the requirements of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.¹

<p>Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations? The corrective action provisions contained in Chapter 6.7 of the Health and Safety Code and the implementing regulations govern the entire corrective action process at leaking UST sites. If it is determined, at any stage in the corrective action process, that UST site closure is appropriate, further compliance with corrective action requirements is not necessary. Corrective action at this site has been consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations and, since this case meets applicable case-closure requirements, further corrective action is not necessary, unless the activity is necessary for case closure.</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this case?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>If so, was the corrective action performed consistent with any order?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p>General Criteria General criteria that must be satisfied by all candidate sites:</p> <p>Is the unauthorized release located within the service area of a public water system?</p> <p>Does the unauthorized release consist only of petroleum?</p> <p>Has the unauthorized (“primary”) release from the UST system been stopped?</p> <p>Has free product been removed to the maximum extent practicable?</p> <p>Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

¹ Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.
http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf

<p>Has secondary source been removed to the extent practicable?</p> <p>Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?</p> <p>Nuisance as defined by Water Code section 13050 does not exist at the site?</p> <p>Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p><u>Media-Specific Criteria</u> Candidate sites must satisfy all three of these media-specific criteria:</p> <p>1. Groundwater: To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites:</p> <p>Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?</p> <p>Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?</p> <p>If YES, check applicable class: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input checked="" type="checkbox"/> 5</p> <p>For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p>2. Petroleum Vapor Intrusion to Indoor Air: The site is considered low-threat for vapor intrusion to indoor air if site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies.</p> <p>Is the site an active commercial petroleum fueling facility? Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk.</p> <p>a. Do site-specific conditions at the release site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4? If YES, check applicable scenarios: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

<p>b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?</p> <p>c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p>3. Direct Contact and Outdoor Air Exposure: The site is considered low-threat for direct contact and outdoor air exposure if site-specific conditions satisfy one of the three classes of sites (a through c).</p> <p>a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?</p> <p>b. Are maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?</p> <p>c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

ATTACHMENT 2: SUMMARY OF BASIC CASE INFORMATION (Conceptual Site Model)

Site Location/History

- The Site is an active nursery and is bounded by businesses across Ashland Avenue to the west, residences to the north, and residences and businesses to the south and east.
- The land use in the area is mixed commercial, industrial and residential.
- A Site map with former UST locations, monitoring wells, and groundwater gradient contours follows this closure summary (Trinity Source Group, 2010).
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Source: UST system.
- Date reported: December 1992.
- Status of Release: USTs removed.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/Removed/Active	Date
1,2	5,000	Diesel	Removed	12/1/92
3	1,000	Gasoline	Removed	Pre-1954

Receptors

- GW Basin: Santa Clara Valley – East Bay Plan.
- Beneficial Uses: San Francisco Regional Water Quality Control Board (Regional Water Board) Basin Plan lists Agricultural, Municipal and Domestic supply.
- Land Use Designation: Commercial.
- Public Water System: East Bay Municipal Utility District.
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no public supply wells regulated by California Department of Public Health within 250 feet of the defined plume boundary. There is an unused irrigation supply well onsite. No other water supply wells were identified within 250 feet of the defined plume in the files reviewed.
- Distance to Nearest Surface Water: There is no identified surface water within 250 feet of the defined plume.

Geology/Hydrogeology

- Stratigraphy: The Site is underlain by interbedded and intermixed sand, silt, and clay.
- Maximum Sample Depth: 20 feet below ground surface (bgs).
- Minimum Groundwater Depth: 6.27 feet bgs at monitoring well MW-5.
- Maximum Groundwater Depth: 11.45 feet bgs at monitoring well MW-4.
- Current Average Depth to Groundwater: Approximately 9 feet bgs.
- Saturated Zones(s) Studied: Approximately 6 - 20 feet bgs.
- Appropriate Screen Interval: Yes.
- Groundwater Flow Direction: Predominantly northwest with an average gradient of 0.003 to 0.007 feet/foot (November 2011).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (11/14/11)
MW-3	June 1993	5 - 20	9.46
MW-4	June 1993	5 - 20	10.06
MW-5	June 1993	5 - 20	8.45
MW-6	September 2012	7 - 17	10.46*

*Measured 09/28/12.

Remediation Summary

- Free Product: None reported in GeoTracker.
- Soil Excavation: Impacted soil was excavated and removed offsite in 1992. Reportedly, an additional 615 yards of soil was excavated in 2011.
- In-Situ Soil/Groundwater Remediation: None reported.

Most Recent Concentrations of Petroleum Constituents in Soil

Constituent	Maximum 0-5 feet bgs [mg/kg (date)]	Maximum 5-10 feet bgs [mg/kg (date)]
Benzene	<0.005 (02/08/13)	<0.005 (02/08/13)
Ethylbenzene	<0.005 (02/08/13)	<0.005 (02/08/13)
Naphthalene	<0.005 (02/08/13)	<0.005 (02/08/13)
PAHs	NA	NA

NA: Not Analyzed, Not Applicable or Data Not Available

mg/kg: Milligrams per kilogram, parts per million

<: Not detected at or above stated reporting limit

PAHs: Polycyclic aromatic hydrocarbons

Most Recent Concentrations of Petroleum Constituents in Groundwater

Sample	Sample Date	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-3	11/14/11	480	110	<0.5	<0.5	6.4	28.8	<0.5	<10
MW-4	11/14/11	<50	<100	<0.5	<0.5	<0.5	<1	<0.5	<10
MW-5	11/14/11	<50	<100	<0.5	<0.5	<0.5	<1	<0.5	<10
MW-6	09/28/12	<100	NA	<0.5	<0.5	<0.5	<1	<2	<10
WQOs	-	--	--	1	150	700	1,750	5	1,200^a

NA: Not Analyzed, Not Applicable or Data Not Available

µg/L: Micrograms per liter, parts per billion

<: Not detected at or above stated reporting limit

TPHg: Total petroleum hydrocarbons as gasoline

TPHd: Total petroleum hydrocarbons as diesel

MTBE: Methyl tert-butyl ether

TBA: Tert-butyl alcohol

WQOs: Water Quality Objectives, Regional Water Board Basin Plan

--: Regional Water Board Basin Plan has no numeric WQO for TPHg or TPHd

^a: California Department of Public Health, Response Level

Evaluation of Current Risk

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/Groundwater tested for methyl tert-butyl ether (MTBE): Yes.
- Oxygen Concentrations in Soil Vapor: None reported.
- Plume Length: <100 feet.
- Plume Stable or Decreasing: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Groundwater Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 1 by Class 5. The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product. The nearest surface water body is greater than 250 feet from the defined plume boundary. The nearest water supply well, an unused irrigation well, is approximately 20 feet upgradient from the defined plume boundary. The County has stated that the well is not hydrological connected to the impacted groundwater. The regulatory agency determines, based on an analysis of site specific conditions, which under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame.
- Indoor Vapor Risk from Residual Petroleum Hydrocarbons: This case meets Policy Criterion 2b. A site-specific risk assessment of potential exposure to petroleum constituents as a result of vapor intrusion [*Franklin J Goldman, March 2013*] found that maximum concentrations of petroleum constituents remaining in soil and groundwater will have no significant risk of adversely affecting human health.
- Direct Contact Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Policy Table 1 for Commercial/Industrial use, and the concentration limits for a Utility Worker are not exceeded.

